

### **REMARKS**

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks and the **two Rule 132 Declarations**. One of the Declarations was previously filed on December 29, 2003. The other Rule 132 Declaration is new and shows data indicating that **superior results are achieved when using ammonium sulfite compared to sodium sulfite**, as requested by the Examiner.

The present invention as set forth in **amended Claim 1** relates to a process for producing a tetrafluoroethylene polymer, comprising:

polymerizing tetrafluoroethylene in an aqueous medium in the presence of a dispersant, a stabilizer and a polymerization initiator;

wherein the polymerization initiator is a redox polymerization initiator comprising **potassium bromate/ammonium sulfite**.

Malhotra (US 4,748,217) and Gould (Inorganic reactions and Structure, 1962 ed., page 84) fail to disclose or suggest the claimed process in which a redox polymerization initiator comprising **potassium bromate/ammonium sulfite** is used. The specific combination is not disclosed.

Malhotra discloses at col. 1, lines 45-48 a polymerization initiator consisting of  $x\text{BrO}_3/y\text{HSO}_3$ . **This system is a bisulfite system and not a sulfite system as claimed.** Thus, the claimed invention cannot be anticipated by Malhotra. In addition, Malhotra discloses that x and y are hydrogen, ammonium, alkali metal or alkaline earth metal ions (Malhotra, col. 1, lines 46-48). However, a combination in which x is potassium and y is ammonium is not disclosed. Further, the reference exemplifies potassium bromate/sodium bisulfite systems (Malhotra, col. 4, lines 23-27, Examples 1-4 and Comparative Runs A and B). Gould does not cure the defects of the primary reference as it also fails to disclose or

suggest the claimed initiator system. However, the claimed system provides superior results.

For example, SSG and stress relaxation time are superior.

SSG is an index of a molecular weight. A lower SSG value indicates a larger molecular weight.

The SSG values in the Examples of the present invention are lower than the SSG values in the Examples of the Malhotra patent, and consequently the molecular weights in the Examples of the present invention are larger than those in the Examples of the Malhotra patent. As a molecular weight is larger, a strength becomes higher.

Below, the data for SSG from Table 1 of the Malhotra patent and of the Examples of the present invention are summarized.

**Malhotra**

	Example 1	Example 2	Example 3	Example 4	Example 5	Average Value
SSG	2.160	2.160	2.164	2.154	2.159	2.1594

**Examples of the present invention**

	Example 1	Example 2	Example 3	Example 4	Example 5	Average Value
SSG	2.148	2.150	2.154	2.154	2.155	2.1522

Further, the longer the stress relaxation time is longer, the better the heat resistance. Below, the data for the stress relaxation time from Table 1 of the Malhotra patent and of the Examples of the present invention are summarized. With regard to Example 5 of the present invention, Applicants note that a typographical error occurred in this application as well as in the Japanese priority documents. Accordingly, Applicants attach herewith a **Rule 132**

**Declaration** regarding this error. The Table below accordingly contains the corrected value for Example 5. (The value in the specification is 520.)

**Malhotra**

	Example 1	Example 2	Example 3	Example 4	Example 5	Average Value
Stress relaxation time	700	615	570	615	585	617

**Examples of the present invention**

	Example 1	Example 2	Example 3	Example 4	Example 5	Average Value
Stress relaxation time	741	730	706	660	703	708

In view of the corrected value for Example 5, the corrected average value of the stress relaxation times in the Examples of the present invention becomes much longer, which proves that the polymer of the present invention has a much higher heat resistance as compared with that of the Malhotra patent.

The superior results of the present invention are not disclosed or suggested by the cited references alone or in combination.

Even further, Applicants provide herewith a **new Rule 132 Declaration** showing the **superior results achieved when using ammonium sulfite** compared to sodium sulfite. The Table below is copied from the Rule 312 Declaration.

Table A

	Example 1 (according to present invention) ( <b>ammonium sulfite</b> )	Comparative Example A ( <b>sodium sulfite</b> )
SSG	2.148	2.1504
Stress Relaxation Time (sec)	741	501

As evident from Table A, PTFE prepared in accordance with Example 1 of the present invention using **ammonium sulfite** has a **smaller SSG value** (having a larger molecular weight) and a **longer Stress Relaxation Time** (excellent in heat resistance) compared to the comparative PTFE prepared by using sodium sulfite. Thus, PTFE prepared according to the present invention is superior to PTFE prepared using sodium sulfite. Such result is unexpected.

The superior results of the present invention are not disclosed or suggested by the cited references alone or in combination.

Therefore, the rejection of Claims 1-20 under 35 U.S.C. §102(b) as anticipated by Malhotra (US 4,748,217), as evidenced by Gould (Inorganic reactions and Structure, 1962 ed., page 84) is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

Applicants respectfully request that the Examiner acknowledge that the references cited in the **Information Disclosure Statement**, filed in the above-identified application on **June 13, 2003**, have been considered. For the Examiner's convenience a copy of Form PTO 1449 as filed on June 13, 2003, is attached herewith.

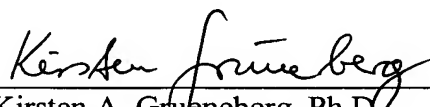
Application No. 10/072,995  
Reply to Office Action of August 26, 2003.

Applicants submit that the present application is now in condition for allowance and early notice of such action is earnestly solicited.

Respectfully submitted,

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